



# **NAAQS Implementation and CSAPR/CAIR Update**

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**MA SIP Steering Committee Meeting  
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# Overview of Presentation

- NAAQS Implementation
  - $O_3$
  - $PM_{2.5}$
  - $SO_2$
- CAIR/CSAPR

# NAAQS Reviews: Status Update

- The Clean Air Act requires EPA to review National Ambient Air Quality Standards (NAAQS) every 5 years to determine whether they should be retained or revised.

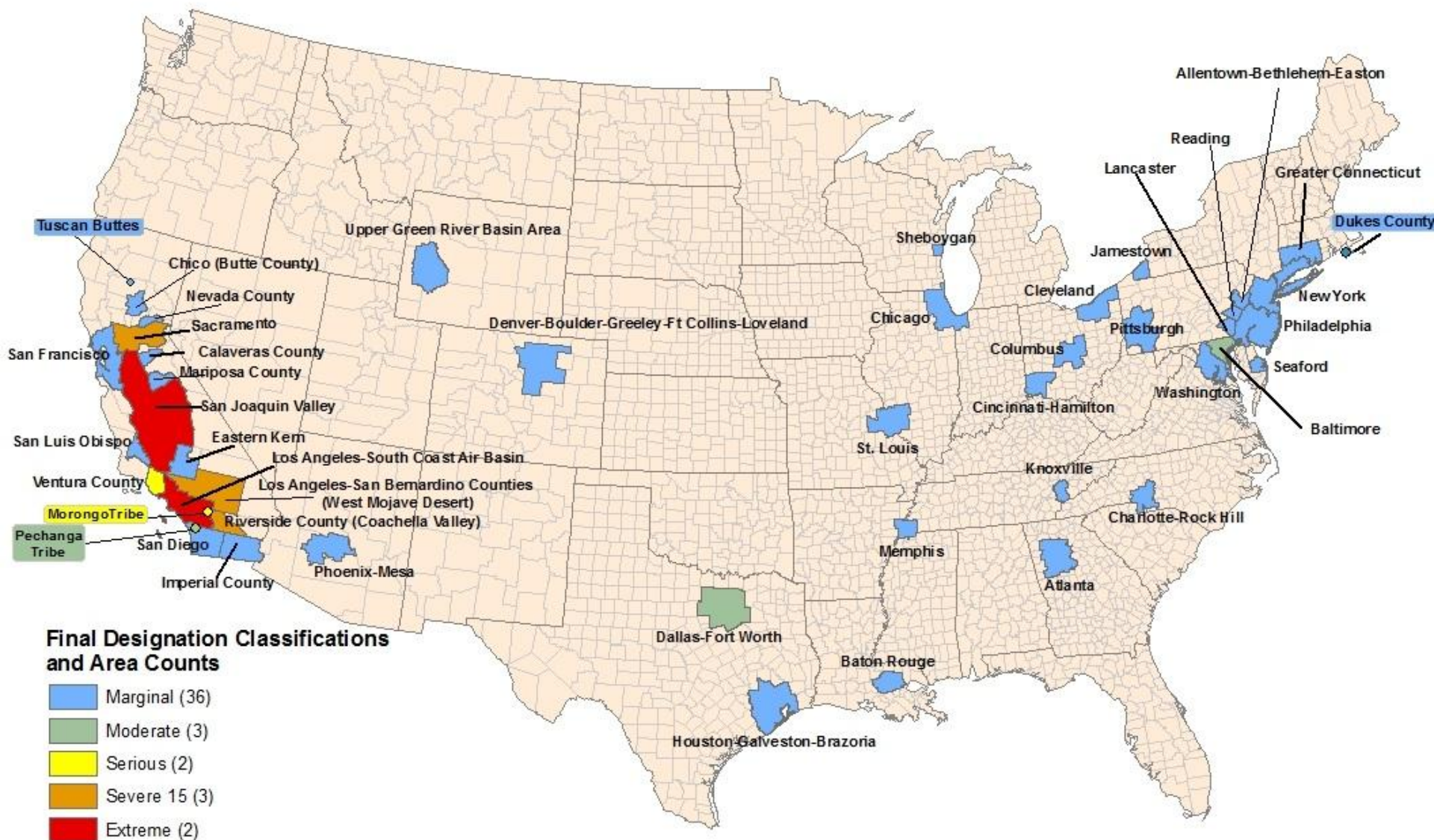
	Ozone	Lead	Primary NO <sub>2</sub>	Primary SO <sub>2</sub>	Secondary NO <sub>2</sub> and SO <sub>2</sub>	PM	CO
<b>Last Review Completed</b> (final rule signed)	Mar 2008	Oct 2008	Jan 2010	Jun 2010	Mar 2012	Dec 2012	Aug 2011

# 2008 Ozone NAAQS Implementation

- Revised primary 8-hr Ozone standard in 2008 (75 ppb)
- EPA designations for the 2008 Ozone NAAQS effective on July 20, 2012
- 2008 Ozone NAAQS SIP Requirements Rule
  - Proposed May 29, 2013 (78 FR 34178)
  - Anticipate final rule in early 2015
  - RACT plans due July 20, 2014
    - Applies in moderate and above NA's, and throughout OTR
  - Attainment demonstrations due July 2015 (Moderate) or July 2016 (Serious and above)

# Nonattainment Areas for 2008 Ozone NAAQS by Classification

(Effective July 20, 2012)



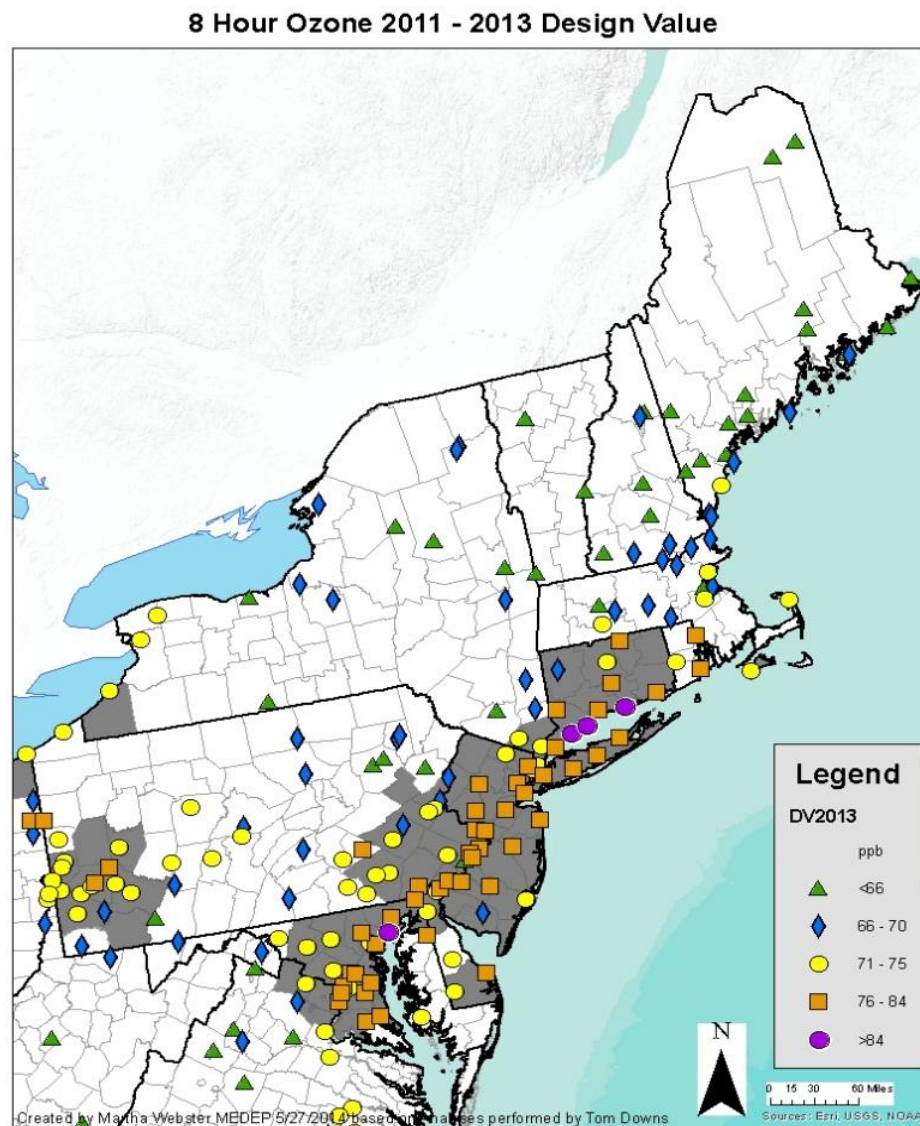
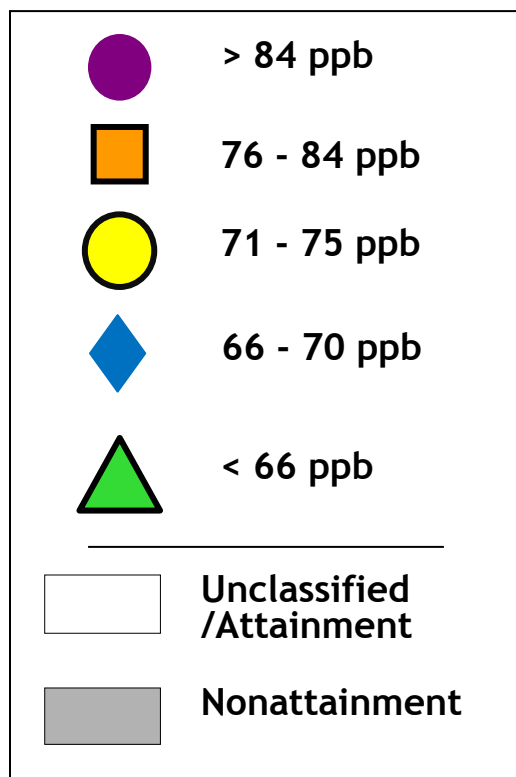
## Notes:

- EPA has not designated as nonattainment any areas outside the Continental US.
- Map reflects classifications following requests for voluntary bump-up.



# Final 2013 Ozone Design Values

3-Year average of the  
4<sup>th</sup> high concentration  
for 2011, 2012, 2013



# New England Exceedance Day Trend for 2008 O<sub>3</sub> NAAQS

	<b>2014 (# Exceedance Days)* (As of Sept 25)</b>	<b>2013 (# Exceedance Days)</b>	<b>2012 (# Exceedance Days)</b>
CT	8	17	27
ME	0	5	4
MA	0	6	17
NH	1	3	4
RI	0	7	12
VT	0	0	0
NE	9	20	29

\*2014 Data are Preliminary

# Current Ozone NAAQS Review

- Received court ruling on April 29, 2014
  - Propose December 1, 2014
  - Final October 1, 2015
  
- The EPA staff conclusions for the primary and secondary standards are based on consideration of:
  - The scientific evidence discussed in the Integrated Science Assessment
  - Estimates of Ozone exposures and risks estimated in the Health Risk and Exposure Assessment
  - Advice received from CASAC
  - Consideration of public comments received at CASAC meetings



# Current Ozone NAAQS Review

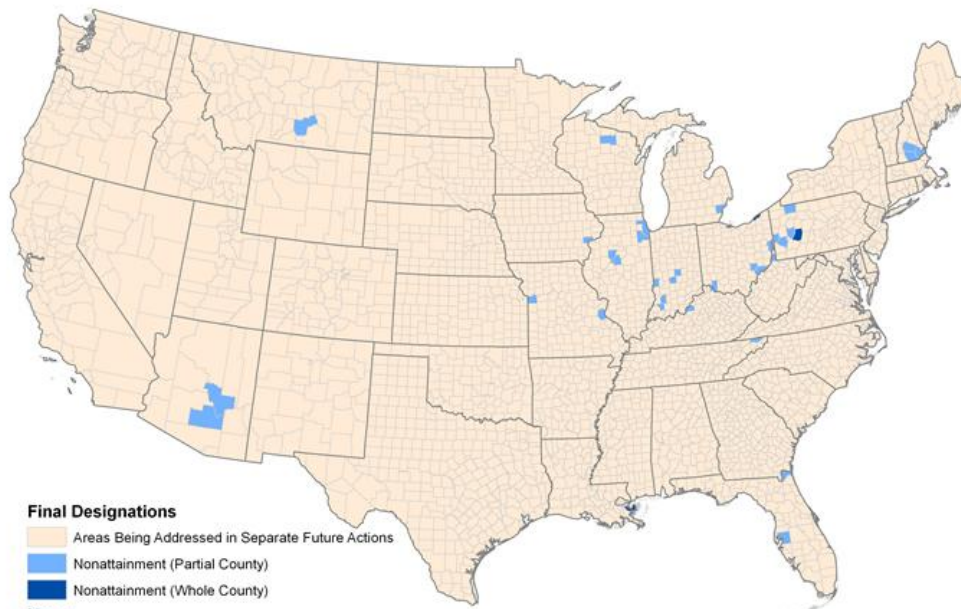
- EPA staff conclude available health evidence and exposure/risk information call into question the adequacy of the public health protection provided by the current primary standard
  - EPA staff concluded it is appropriate to consider revising the level within the range of 70 ppb to 60 ppb
- EPA staff conclude available vegetation and ecosystem effects evidence and exposure/risk calls into question the adequacy of the public welfare protection provided by the current secondary standard
  - EPA staff concluded it is appropriate to consider a range of levels from 17 to 7 ppm-hrs, expressed in terms of the W126 index
  - The W126 index is a method for measuring cumulative, seasonal exposures of ozone.

# PM<sub>2.5</sub> NAAQS Implementation

- EPA revised the annual primary PM<sub>2.5</sub> NAAQS to 12 µg/m<sup>3</sup> from the previous level of 15 µg/m<sup>3</sup> on Dec 14, 2012.
  - EPA retained daily PM<sub>2.5</sub> standard of 35 µg/m<sup>3</sup> set in 2006.
- Status of Designations
  - Aug 19, 2014 - EPA sent letters to all states (and certain tribes) outlining its intended area designations for annual standards.
    - EPA intends to designate 14 areas (in six states (CA, ID, KY/IN, OH, PA)) as “nonattainment.”
    - EPA intends to designate certain areas as “unclassifiable”
    - EPA is deferring designations for 1 year for certain GA areas
    - EPA intends to designate all other areas, including all states in New England, as “unclassifiable/attainment”
- Next Steps
  - States/tribes have until Oct 29 to submit additional information for EPA to consider
  - Final designations expected in December 2014

# 2010 SO<sub>2</sub> NAAQS Implementation

- Revised primary SO<sub>2</sub> standard: June 2010 (75 ppb/1-hr)
- Initial nonattainment area designations, based on violating monitors, were effective October 4, 2013
  - 29 areas in 16 states designated (in New England, only NH area)
  - Attainment plans due April 2015



**Notes:**

EPA is not designating as nonattainment any areas outside the Continental US in Round 1.

# 2010 SO<sub>2</sub> NAAQS Implementation

- 1-hr SO<sub>2</sub> NAAQS Nonattainment SIP Elements Guidance
  - Objective is to provide assistance to areas developing their nonattainment area plans
  - Issued guidance on April 24, 2014  
<http://www.epa.gov/airquality/sulfurdioxide/pdfs/20140423guidance.pdf>
  
- SO<sub>2</sub> Data Requirements Rule
  - Objective is to provide information to EPA in an orderly fashion to inform initial area designations for areas not designated in 2013
  - Proposal published in FR on May 13, 2014  
<https://www.federalregister.gov/articles/2014/05/13/2014-09458/data-requirements-rule-for-the-1-hour-sulfur-dioxide-so2>
  - Final scheduled for summer 2015

# 2010 SO<sub>2</sub> NAAQS Implementation

SO<sub>2</sub> Designations and Implementation Strategy provides for three rounds of designations:

- First round of designations
  - Promulgated on August 5, 2013 (effective October 2013)
  - Attainment SIPs due April 2015
  - Attainment date October 2018
- Second round **BASED ON MODELING** by December 2017 (effective by February 2018)
  - Attainment SIPs due August 2019
  - Attainment date February 2023
- Third round **BASED ON MONITORING** by December 2020 (effective by February 2021)
  - Attainment SIPs due August 2022
  - Attainment date February 2026

# Proposed Consent Decree

Proposed consent decree between U.S. and Sierra Club/NRDC could result in additional round of designations for source areas

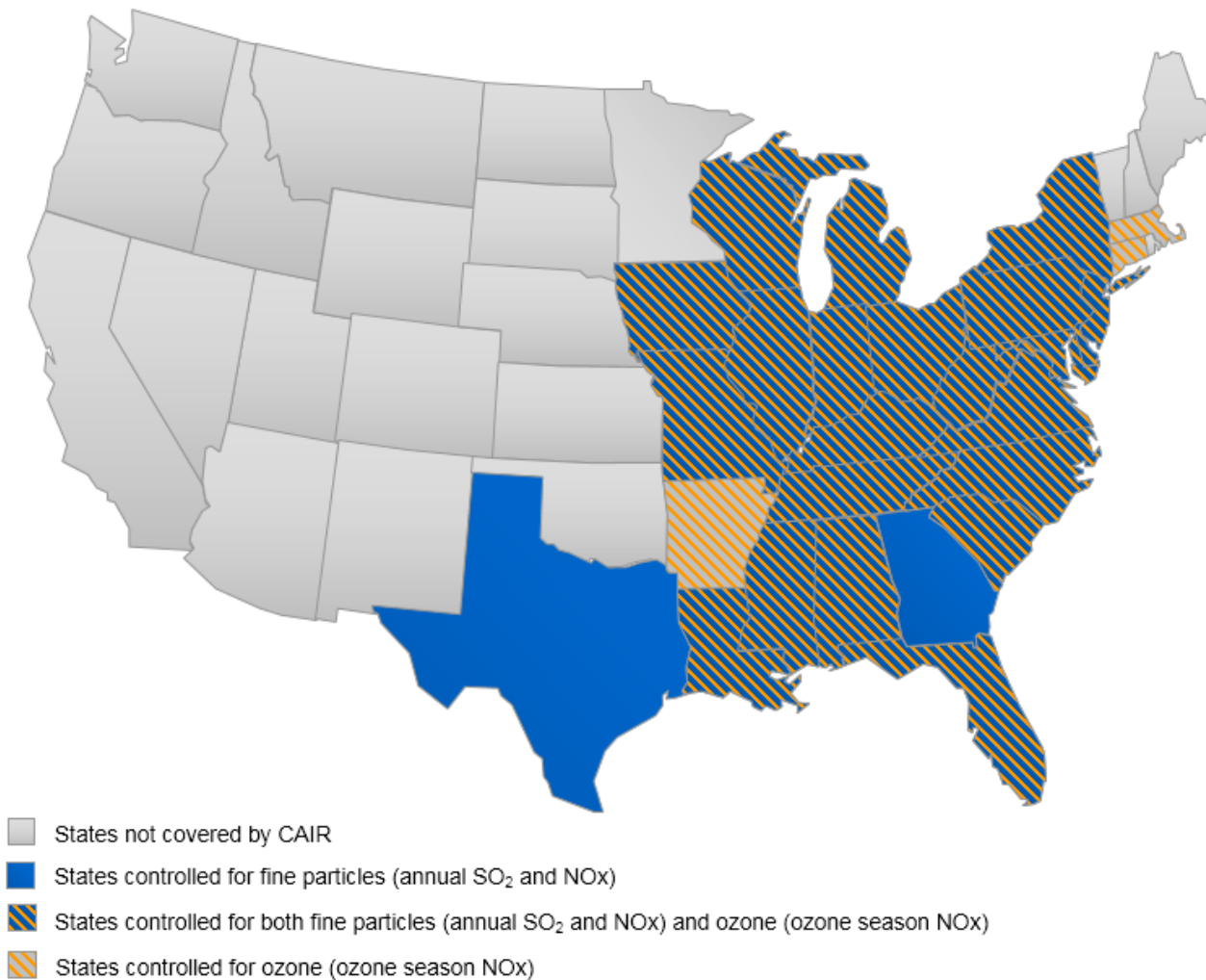
- Based on size of sources included in proposed consent decree, this would not impact any sources in New England
- Brayton Point would meet size thresholds, but proposed CD only applies to sources that have not been “announced for retirement”



# Clean Air Interstate Rule (CAIR)

- Clean Air Act requires states to address emissions that “contribute significantly” to nonattainment or “interfere with maintenance” of NAAQS in downwind states.
- March 2005 - EPA issued Clean Air Interstate Rule (CAIR) covering 27 eastern states and DC. CAIR uses cap & trade program to reduce SO<sub>2</sub> and NO<sub>x</sub> emissions from power plants to meet 1997 annual and 24-hour fine particle (PM<sub>2.5</sub>) and 1997 8-hour ozone NAAQS.
  - CAIR was projected, at full implementation, to reduce power plant SO<sub>2</sub> emissions in affected states to just 2.5 million tons, 73% below 2003 emissions levels.
  - For NO<sub>x</sub>, CAIR will reduce power plant NO<sub>x</sub> emissions by 2 million tons, achieving a regional emissions level of 1.3 million tons, a 61% reduction from 2003 levels.
- States were required to submit State Implementation Plans (SIPs) to EPA demonstrating compliance with their applicable SO<sub>2</sub> and NO<sub>x</sub> EGU budgets.

# States Covered by CAIR

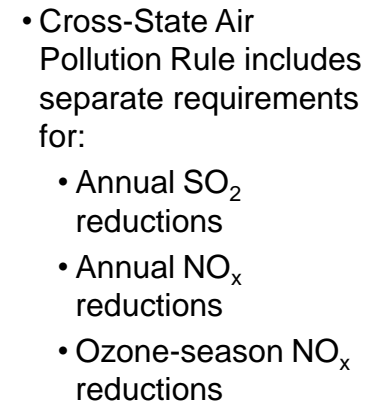


# CAIR Challenged in US Court of Appeals for the DC Circuit

- July 11, 2008 – Court issues decision to vacate CAIR
- Fall 2008 – Parties to the litigation submit requests for rehearing and other information including expected effects of a vacatur
- Dec 23, 2008 – Court amends decision and remands CAIR without vacatur
  - Requires EPA to promulgate replacement rules to CAIR, consistent with the Court's July 11, 2008 ruling
  - Leaves CAIR in effect until replacement rules are promulgated

# Cross State Air Pollution Rule (CSAPR)

- July 2011- EPA finalized CAIR replacement rule, the Cross-State Air Pollution Rule (CSAPR).
  - CSAPR focused on attainment and maintenance of the 1997 Ozone NAAQS, 1997 PM<sub>2.5</sub> NAAQS and 2006 PM<sub>2.5</sub> NAAQS
  - CSAPR was intended to cover emissions in 2012 and beyond.
  - CSAPR implemented through a federal rule.
  - CSAPR established new allowances for all programs.
    - There is no carryover of Acid Rain Program, NO<sub>x</sub> SIP Call/NO<sub>x</sub> Budget Trading Program (NBP), or CAIR allowances.
  - By 2014, combined with other final state and EPA actions, the Cross-State Air Pollution Rule was projected to reduce power plant SO<sub>2</sub> emissions by 73 percent and NO<sub>x</sub> emissions by 54 percent from 2005 levels in the CSAPR region.



- \*This map includes states covered in the supplemental notice of proposed rulemaking.

# Litigation on CSAPR

- December 2011 - D.C. Circuit issued ruling to stay CSAPR pending judicial review.
- March 2012 - EPA filed brief defending CSAPR and reasons rule should be upheld.
- August 2012 - D.C. Circuit issued decision to vacate CSAPR.
  - Orders EPA to “continue administering CAIR pending the promulgation of a valid replacement.”
- April 2014 - U.S. Supreme Court (by 6-2 vote) reversed D.C. Circuit opinion vacating CSAPR.



# Efforts to Implement CSAPR

- June 26, 2014 – EPA filed motion with D.C. Circuit to lift stay of CSAPR and to allow it to go into effect beginning Jan 1, 2015
  - If the court adopts EPA's suggestion, phase 1 of the rule would begin in 2015 and phase 2 would go into effect two years later, in 2017.
  - While Court considers motion, CAIR remains in place.
- July 11 – Environmental and public health groups said EPA's schedule is too slow. Think EPA should move directly to implement the second phase of the program.
- July 31 - Utility industry groups and several states file motions fighting EPA's request to lift its stay on implementation of CSAPR.
- Aug 22 - EPA again asks court to reinstate CSAPR while delaying the rule's compliance deadlines by three years.
  - New filing focuses on rejecting industry's and certain states' opposition on lifting the stay

# CAIR and CSAPR in New England

- Connecticut and Massachusetts were included in ozone season CAIR program, but are not in CSAPR, because air quality modeling shows they no longer contribute significantly to nonattainment of the 1997 and 2006 PM NAAQS or the 1997 ozone NAAQS in other states.
- CAIR is in each of these state's SIPs and relied on to meet various Clean Air Act obligations for programs such as Regional Haze and ozone.
- If CSAPR is implemented, EPA will work with these states to develop a replacement program to retain emission reductions achieved under CAIR.